



Entsorga Group Company Presentation

*Environmental technologies
to change waste into resources*



A new technological challenge

Sustainable development and environmental responsibility

Mission

Entsorga was founded in **1997** to take over the challenge and the opportunities mentioned above and **has developed a number of solutions in waste treatment and alternative fuels production** in order to become a main player in providing technologies for the environmental sector.

Drivers and vision

- The principle of **sustainable development** has been accepted as a **central policy objective of the European Union**. The regulations for recycling, recovery and landfill diversion have created a significant market for **new waste treatment technologies**.
- In the **North American market** attention to environmental issues, impacts of MSW and attention to technologies related to **alternative fuels** has been growing substantially in recent years.
- Developing countries are facing the challenge **to combine the economic growth with environmental sustainability** thus making proper waste management a keystone for sustainable policies. The Kyoto protocol and CDM make subsidies available to finance these efforts.

The Group structure



Dr. G. Galanzino

EntsorgaFin CEO
Entsorga Italia CEO
Entsorga UK Director
T&R CEO

50 %



Ing. P. Cella

EntsorgaFin CEO
Entsorga Italia CEO
Entsorga UK Director
Mazzariol Srl Board Member
Entsorga WV CEO

50 %

EntsorgaFin SpA

MARKET DEVELOPMENT PLANT CONSTRUCTION

100 %



**Entsorga
Italia SpA**

Europe and
rest of the
world

100 %



**Entsorga UK
Ltd**

UK, Turkey,
India

ALTERNATIVE FUEL PRODUCTION

100%



**Entsorga USA
Inc.**

16%



**Entsorga West
Virginia**

(Other shareholders:
Chemtex International
Ltd; Apple Valley Inc.)

CO₂ OFFSETTING

45,75 %



**co2balance
Italia Srl**

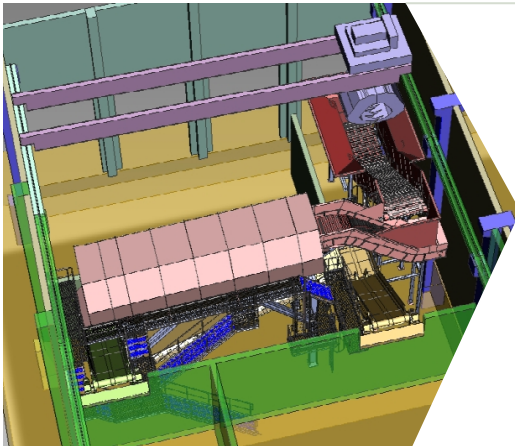
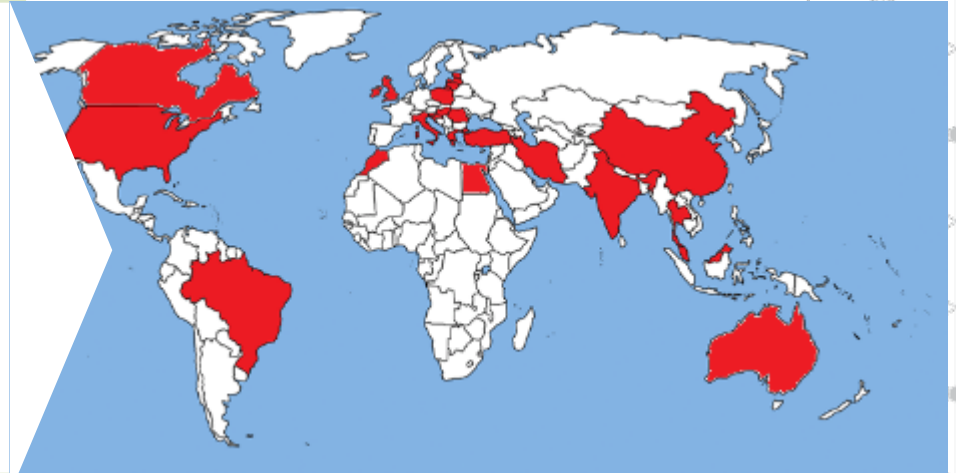
(Other shareholders:
Gruppo Catanzaro
Srl, David Hooper)



We are going global

AREA OF OPERATIONS

- Italy, United Kingdom, Greece, Croatia, Slovenja, Bulgaria, Kurdistan, Poland, Romania, Egypt, Morocco India, Australia.
- USA, Canada and China
- Malaysia trough a partnership with Bioessence inc.
- Brazil trough a commercial agreement with Versus Servicos Ltda



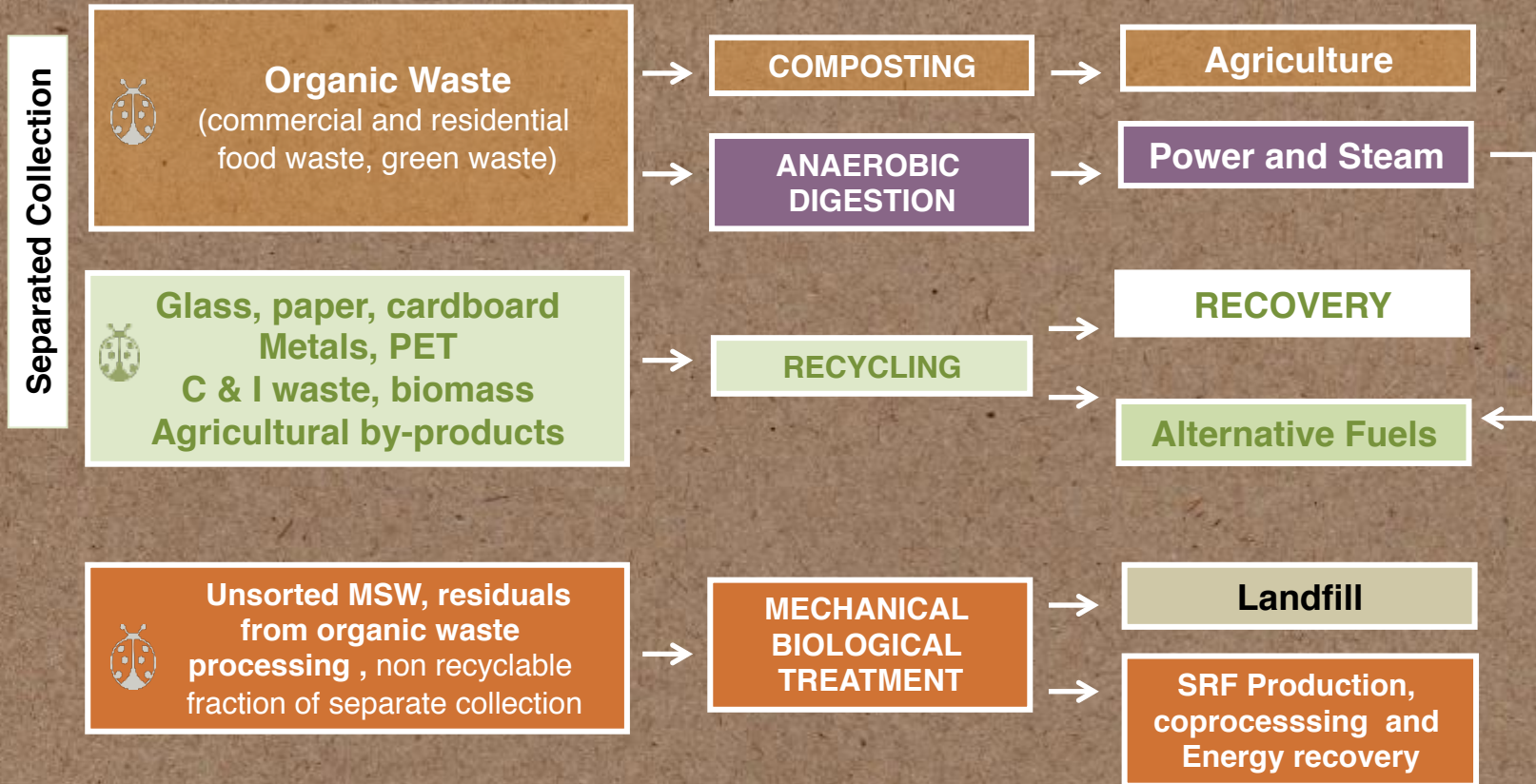
REFERENCES

- More than **80 plants** built and in operation for a total capacity of about **5 million tons**.
- In the UK the technology makes it possible for our partners to award **very important PFI tenders** to build plants in Wiltshire and in Derbyshire and the MBT technology has been **short listed in most of the biggest PFI schemes**.
(see also reference list on www.entsorga.it)





An integrated recovery strategy



In the EU an incoming Circular Economy Policy is setting as targets for 2030:

- a progressive **reduction of landfill waste** (max 10% of all waste)
- **an increase of separate waste collection** (from current 36% to 70% of municipal waste)
- Support for **renewable sources** (including biomethane, and other alternative fuels ...)



Smart solutions, for environment and business

ECONOMIC ADVANTAGES

- **Low investment costs**
- **Low maintenance costs and lower mechanical consumption**
- **Minimum plant downtimes**
- **Reduced updating costs**
- **High reliability and less human errors** thanks to automatic 24/7 process control and management
- **Zero risk** of plant closure due to the low environmental impact that reduces the risk of protest

ENVIRONMENTAL BENEFITS

















- **Reduction of waste disposed of in landfills**
- **Maximum recovery efficiency** from **organic waste** and **unsorted MSW**: recovery of biomass, plastics and other materials
- **Minimum impact** on the surroundings and **improved safety for operators**: the processes take place in closed environments to control odors and avoid the operator's exposure to stale air, dust and any polluting agents
- **Energy efficient processes**
- Real and measurable **savings in CO₂eq emissions**
- Production of **alternative high quality fuel** with high calorific value

FINANCIALLY VIABLE

- **Reliable and verified technologies**, backed by twenty-year of project references
- **Performance certified** by world class independent engineers
- **Proven technology solutions** that can be financed by commercial lenders

TECHNOLOGIES PORTFOLIO



REACTORS		DESCRIPTION	APPLICATION	CAPACITY
BEE™ Fully automated plant with high capacity single reactor		 HIGH CAPACITY PLANT, FULLY AUTOMATED. THIS IS THE STATE OF THE ART IN WASTE TREATMENT	<ul style="list-style-type: none"> • COMPOSTING OF ORGANIC WASTE • BIOSTABILIZATION OF MSW • BIO-DRYING AND SRF (SOLID RECOVERED FUEL) PRODUCTION 	> 30.000 t/y
COCCINELLE™ Container for small plants and soil remediation		 MOVABLE BIO-CONTAINERS SUITABLE FOR ACCELERATED COMPOSTING OF ORGANIC WASTE AND BIOMASSES. REMARKABLE ARE THE LOW ENVIRONMENTAL IMPACT AND THE EASY INSTALLATION.	<ul style="list-style-type: none"> • COMPOSTING OF ORGANIC WASTE • BIOSTABILIZATION OF MSW 	0 - 15.000 t/y
TURTLE Q-RING™ Bio-tunnels with breathable perspiring roof		 THE BREATHABLE ROOF PREVENTS ODOR LEAKS AND GRANTS THE PROCESS PARAMETERS WITHOUT NEEDING DEDICATED BIOFILTERS. THE PROCESS IS FAST: 20 DAYS OF PROCESS TIME FOR BIOSTABILIZATION AND 14 DAYS FOR COMPOSTING.	<ul style="list-style-type: none"> • COMPOSTING OF ORGANIC WASTE • BIOSTABILIZATION OF MSW • BIO-DRYING AND SRF (SOLID RECOVERED FUEL) PRODUCTION 	> 10.000 t/y
BAT Q-RING™ Mobile plants with breathable cover		 MOVABLE PLANT WITH BREATHABLE COVERS AND AIR BLOWERS THAT MAKE IT POSSIBLE A VERY INEXPENSIVE BIOSTABILIZATION AND BIODRYING OF THE MSW. IDEAL IN LOW BUDGET PROJECTS, INTERIM PROJECTS, BIO-REMEDICATION.	<ul style="list-style-type: none"> • BIOSTABILIZATION OF MSW • BIO-DRYING AND SRF (SOLID RECOVERED FUEL) PRODUCTION 	N.A.
Q-RING™ Breathable fabrics		 IT IS THE ENTRY LEVEL PRODUCT, SUITABLE FOR INTERIM SOLUTION AND FOR THE COUNTRIES WILLING TO IMPLEMENT A FIRST STEP TOWARD MODERN WASTE MANAGEMENT.	<ul style="list-style-type: none"> • BIOSTABILIZATION OF MSW • BIO-DRYING AND SRF (SOLID RECOVERED FUEL) PRODUCTION • COMPOST CURING 	0 - 100.000 t/y
SCRABBLE™ Bio-tunnels in concrete with biofilters		 BIO-TUNNELS MADE UP IN CONCRETE FOR THE ACCELERATED FERMENTATION OF THE BIOMASSES.	<ul style="list-style-type: none"> • COMPOSTING OF ORGANIC WASTE • BIOSTABILIZATION OF MSW • BIO-DRYING AND SRF (SOLID RECOVERED FUEL) PRODUCTION 	0 - 30.000 t/y
COW™ Anaerobic digestion wet and semi dry		 WASTE AND BIOMASSES AND CROPS TREATMENT WITH PRODUCTION OF BIOGAS CONVERTIBLE IN ELECTRIC POWER AND/OR BIO METHANE.	PLANT FOR ANAEROBIC DIGESTION OF ORGANIC WASTE AND SEWAGE SLUDGE AND BIOMASSES.	> 30.000 t/y
SWALLOW™ Pre treatment		 WASTE AND BIOMASSES PRETREATMENT	MBT TREATMENT PLANTS FOR THE MSW PRE TREATMENT	N.A.



TECHNOLOGIES PORTFOLIO

MECHANICAL TREATMENT & EQUIPMENT

SPIDER™
Fully automated cranes



BULK MATERIAL HANDLING SYSTEM CHARACTERIZED BY THE FOLLOWING FEATURES:

- HIGH EFFICIENCY, CAPACITY, VELOCITY.
- COMPLETELY AUTOMATED
- GREAT VALUE FOR MONEY

APPLICATION

AUTOMATED CRANE FOR BULK MATERIAL HANDLING AND STORAGE. SUITABLE FOR WASTE, TIRES AND BIOMASSES.

CAPACITY

N.A.

PROMETHEUS™
Solid Recovered Fuel refining system



MECHANICAL TREATMENT LINE FULLY AUTOMATED TO REFINE SOLID RECOVERED FUEL DERIVING FROM VARIOUS TYPES OF WASTE (BIO-DRIED WASTE, TIRES, COMMERCIAL AND INDUSTRIAL WASTE, BIOMASSES). THIS LINE IS THE IDEAL COMPLEMENT AFTER ANY OF THE ENTSORGA BIODRYING TECHNOLOGIES.

MECHANICAL REFINEMENT FOR PRODUCTION OF SOLID RECOVERED FUEL (SRF), PRE ENGINEERED FUEL (PEF) AND ALTERNATIVE FUEL (AF)

35-70 t/h

PELICAN™
Feeding line of Solid Recovered Fuel to cement kilns



THE PLANT IS MADE UP OF A DOCKING STATION, FEEDING LINE, DOSING SYSTEM AND PNEUMATIC TRANSPORT. THE PLANT IS CONCEIVED TO DOSE AND FEED ALTERNATIVE FUELS TO CEMENT KILNS.

FEEDING LINE OF SOLID RECOVERED FUEL TO CEMENT KILNS.

7-15 t/h

FALCON™
NIR optical sorter for plastic sorting and recycling



THE MACHINERY IS BASED ON OPTICAL SPECTROGRAPH NIR (NEAR INFRA RED). IT IS DESIGNED TO SORT DIFFERENT QUALITIES OF PLASTIC, CARDS AND CARDBOARD AND IN PARTICULAR TO REMOVE PVC FROM ALTERNATIVE SOLID FUELS

- PLASTIC SORTING FOR RECYCLING
- REMOVAL OF PVC FROM SRF

8 t/h

BIOMASS PRE-TREATMENT
Biomass pretreatment and feeding



ENTSORGA SUCCESSFULLY SUPPLIED THE BIOMASSES PRETREATMENT AND FEEDING LINE TO THE ONLY FULL SCALE PLANT IN THE WORLD PRODUCING CELLULOSIC BIOETHANOL.

BIOMASS PRE CONDITIONING DOSING AND FEEDING FOR SECOND GENERATION BIOETHANOL PLANT.

25 t/h

AIR EMISSION CLEANING

GECO₂™
Methane cleaning system from landfill biogas



DEVICE TO CLEAN METHANE FROM LANDFILL BIOGAS. METHANE IS 21 TIMES MORE POLLUTANT THAN CARBON DIOXIDE IN TERMS OF GREEN HOUSE POTENTIAL. THIS SYSTEM IS USED TO CLEAN THE BIOGAS WHEN THE CONCENTRATION OF METHANE IS TOO LOW TO HAVE IT RECOVERED FOR POWER PRODUCTION OR COMBUSTED BY TORCH.

APPLICATION

METHANE CLEANING FROM BIOGAS AT LOW METHANE CONCENTRATION

CAPACITY

650-1.500 t OF CO₂ EQUIVALENT (EACH MODULE)

BIOFILTER
Odour cleaning



BIOLOGICAL SYSTEM TO TREAT THE ODOR EMISSION FROM WASTE TREATMENT PLANTS AND WATER CLEANING PLANTS. THE NATURAL HETEROGENEOUS MICROBIAL POPULATION IN THE FILTER TAKES CARE OF "EATING" THE ODOR COMPOUNDS AND RELEASES INTO THE ATMOSPHERE ONLY WATER VAPOR AND CARBON DIOXIDE AS BY PRODUCTS OF THEIR METABOLIC ACTIVITY.

BIOLOGICAL SYSTEMS FOR THE ODORS EMISSIONS ABATEMENT

NO LIMIT IN AIR CAPACITY
ABATEMENT EFFICIENCY UP TO 99.9%

COMPOSTING and ANAEROBIC DIGESTION

Territorio e Risorse Srl - Santhià, Italy



Plant throughput	50.000 t/a tpa of OFMSW
Carbon dioxide diversion	22,500 tpa
Final output	High quality compost: up to 10,000 tpa Biogas: up to 4,500.000 m ³ /y from which we can obtain up to 2.750.000 m ³ /y of Bio-methane to be put into the net SRF from residual plastics: up to 3,000 tpa
Start up	Composting: November 2009 Anaerobic Digestion: from 2019-2020
Inhabitants served	Up to 730.000
Staff	9



THE PLANT PRODUCES **QUALITY COMPOST** STARTING FROM ORGANIC **KITCHEN WASTE** AND REPRESENTS THE STATE OF THE ART OF THE WASTE RECOVERY ENTSORGA PROPRIETARY TECHNOLOGIES.

RECENTLY PERMITTED TO **DOUBLE THE CAPACITY**, IT WILL ALSO PRODUCE BIOGAS BY USING **ANAEROBIC DIGESTION** AND THEN **BIOMETHANE FOR NATURAL GAS NETWORK**. THE SYNERGY OF THESE TWO TREATMENT SOLUTIONS LIMITS FURTHER THE ENVIRONMENTAL IMPACTS AND OPTIMIZES THE MANAGEMENT AND WASTE RECOVERY PROCESSES.



COMPOSTING

La Città Verde – Crevalcore - Italy



Capacity	15.000 t/a
Treated waste	Commercial and residential organic waste
Final Output	Up to 4,000 tpa of high quality compost
Start up	2016
Plant type	Composting



WITH THE **TURTLE™ BIOCELLS SYSTEM**, ENTSORGA ENABLED THE COMMUNITY OF GALDA DE JOS AND THE PROVINCE OF ALBA JULIA TO MANAGE MORE EFFICIENTLY **MUNICIPAL SOLID WASTE** BY PREPROCESSING MSW PRIOR TO LANDFILLING. THIS SUBSTANTIALLY **IMPROVED THE ENVIRONMENTAL IMPACT** OF THE DISPOSAL SYSTEM BY REDUCING VOLUMES LANDFILLED, LEACHATE PRODUCED AND RELEVANT GREENHOUSE GASES EMISSIONS.



MBT BIOSTABILIZATION AND SRF PRODUCTION

The Simbio plant - Celje, Slovenja



Capacity	62.000 tpa MSWr 15.000 tpa Organic waste
Treated waste	MSWr Selected Organic waste, recyclable matrices from separated collect
Final Output	31.460 tpa SRF Lower Heating Value (LHV) SRF: 17 MJ/kg Compost: approx. 8.900 tpa used in agriculture
Start up	September 2008
Population Served	250.000 (including 24-municipalities of the "Savinjska" Region)
Employees	12



THE INTRODUCTION OF THE ENTSORGA MECHANICAL AND BIOLOGICAL TREATMENT METHOD ALLOWED THE MUNICIPALITY OF CELJE (SL) **TO SUBSTANTIALLY DECREASE THE QUANTITY OF MUNICIPAL SOLID WASTE SENT IN LANDFILL AND TO OBTAIN A RENEWABLE FUEL** TO PRODUCE ELECTRICITY AND HEAT THAT SUPPORTS 60% OF THE ENERGY NEEDS OF THE CITY.



MBT BIOSTABILIZATION AND SRF PRODUCTION

DECO SpA - Chieti, Italy



Capacity	300.000 tpa of unsorted Municipal Solid Waste
Treated waste	Unsorted Municipal Solid Waste
Final Output	135.000 tpa of SRF
Start up	November 2009
Population served	1.000.000
Employees	25



ONE OF THE LARGEST AND MOST INNOVATIVE BIOSTABILIZATION PLANT IN EUROPE, THANKS TO ITS FLEXIBILITY IT CAN TRANSFORM LARGE VOLUMES OF MUNICIPAL SOLID WASTE INTO SOLID RECOVERED FUEL (SRF) FOR VARIOUS USES, FROM CEMENT KILNS TO DEDICATED POWER GENERATION PLANTS.



MBT BIOSTABILIZATION AND SRF PRODUCTION

Northacre RRC - Wiltshire, UK



Capacity	80.000 tpa
Treated waste	Unsorted Municipal Solid Waste
Final Output	<ul style="list-style-type: none">• SRF: 28.000 tpa• Stabilized residual for landfilling: 16.800 tpa• Metals: 660 t/a
Start up	October 2013
Served basin	400.000 approx. inhabitants
Staff	16



THE WESTBURY MECHANICAL BIOLOGICAL TREATMENT PLANT (MBT) IS THE KEYSTONE OF THE WILTSHIRE ENVIRONMENTAL STRATEGY. THANKS TO THIS SOLUTION, **THE COUNTRY CAN FULFILL THE NATIONAL AND EUROPEAN OBJECTIVES OF LANDFILLING REDUCTION**, ENSURING IN THIS WAY YEARLY 3 MILLION POUNDS SAVING.

IN ADDITION, THE PRODUCT OBTAINED FROM THE TREATMENT, A **HIGH QUALITY SOLID RECOVERY FUEL**, IS USED TO PRODUCE **ENERGY AND HEAT**, ENSURING THE ENVIRONMENT AN ADDITIONAL SAVING IN TERMS OF CO₂ EMISSIONS.



MBT BIOSTABILIZATION AND SRF PRODUCTION

Resource Recovery Solutions - Derby, UK



Capacity	190.000 tpa of MSW
Treated waste	Residual MSW after source separation
Final Output	Solid recovered fuel
Start up	January 2017
Population Served	630.000



THE PROJECT IS PART OF **ONE OF THE LARGEST RECENT PROJECT FINANCE DEALS IN THE WASTE SECTOR IN THE UNITED KINGDOM**, THE ENTSORGA SYSTEM ALLOWS TRANSFORMING MUNICIPAL SOLID WASTE IN A **HIGH QUALITY HIGH BIOGENIC VALUE ALTERNATIVE FUEL** USED BY A COLOCATED DOWNSTREAM GASIFICATION UNIT.

THE PROJECT IS **THE FIRST COMMERCIAL SCALE** PLANT THAT INTEGRATES A **MECHANICAL AND BIOLOGICAL TREATMENT** WITH THE USE OF **THE HIGH BIOGENIC ALTERNATIVE FUEL** PRODUCED IN AN ADVANCED GASIFICATION TO POWER UNIT.

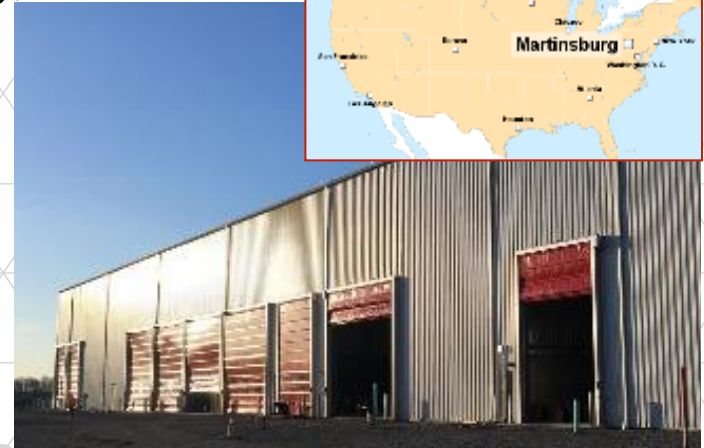


MBT BIOSTABILIZATION AND SRF PRODUCTION

Entsorga West Virginia- Martinsburg, USA



Capacity	80.000 t/y Municipal Solid Waste 35.000 t/y Commercial and industrial Waste
Treated waste	Unsorted Municipal Solid Waste
Final Output	SRF: 55,000 t/y Stabilized residual for landfilling: 8,000 t/y Recyclable Metals: 5,500 t/y
Start up	March 2019
Population Served	400.000



MECHANICAL AND BIOLOGICAL TREATMENT PLANT LOCATED IN MARTINSBURG, WEST VIRGINIA IS DESIGNED TO RECEIVE AND HANDLE MUNICIPAL SOLID WASTE GENERATED IN BERKELEY COUNTY AND PRODUCE N.H.S.M. ALTERNATIVE FUELS FOR INDUSTRIAL USERS.

THIS PROJECT REPRESENTS AN IMPORTANT MILESTONES FOR ENTSORGA, WHICH CONCLUDES A LONG PATH OF RESEARCH STARTED 15 YEARS AGO TO FIND A **SAFE, SUSTAINABLE AND CLEAN ALTERNATIVE TO LANDFILL DISPOSAL**, AND THE FIRST ENTSORGA FACILITY IN NORTH AMERICA.



SRF PRODUCTION

Suez Cement - Egypt



PLANT TYPE	Alternative fuels refining line
WASTE TREATED	Rifiuto Solido Urbano (RSU)
FINAL PRODUCT	RDF
START UP	2014



SENSITIVE IN THE FIELD OF SAFETY AND ENVIRONMENTAL POLICIES, **SUEZ CEMENT** HAS TAKEN VARIOUS ACTIONS TO REDUCE ITS CARBON DIOXIDE EMISSIONS USING ALTERNATIVE FUELS OBTAINED FROM WASTE. TO MAXIMIZE THE QUALITY OF THE ALTERNATIVE FUEL USED IN THE ITS KATTAMEYA PLANT, SUEZ CEMENT HAS INSTALLED A **MECHANICAL REFINING SYSTEM OF THE PROMETHEUS™ LINE**, A HIGHLY EFFICIENT SOLUTION THAT GUARANTEES FUEL WITH **HIGH CALORIFIC POWER AND LOW ENVIRONMENTAL IMPACT.**



MBT BIOSTABILIZATION

Galda de Jos - Alba Julia - Romania

Capacity	85.000 tpa of Unsorted Municipal Solid Waste
Treated waste	Unsorted Municipal Solid Waste
Final Output	35.000 tpa of Compost Like Output (CLO) sent to landfill
Start up	2018
Population	200.000
Employees	6



WITH THE **TURTLE™ BIOCELLS SYSTEM**, ENTSORGA ENABLED THE COMMUNITY OF GALDA DE JOS AND THE PROVINCE OF ALBA JULIA TO MANAGE MORE EFFICIENTLY **MUNICIPAL SOLID WASTE** BY PREPROCESSING MSW PRIOR TO LANDFILLING. THIS SUBSTANTIALLY **IMPROVED THE ENVIRONMENTAL IMPACT** OF THE DISPOSAL SYSTEM BY REDUCING VOLUMES LANDFILLED, LEACHATE PRODUCED AND RELEVANT GREENHOUSE GASES EMISSIONS.

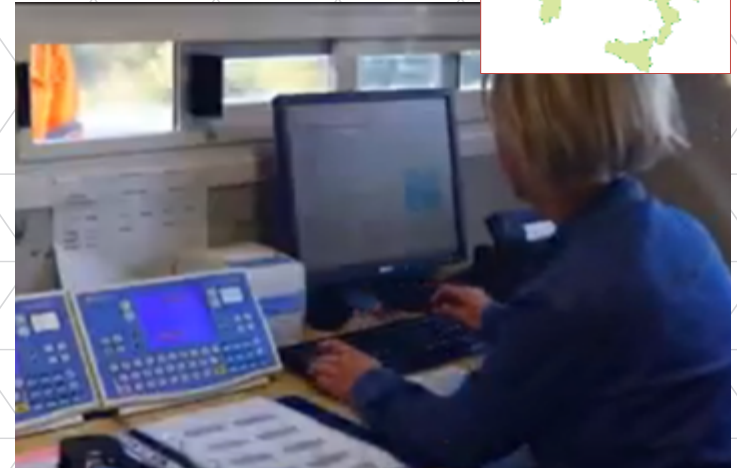


MBT BIOSTABILIZATION

Belvedere – Peccioli - Italy



Capacity	90,000 Tpa MSW
Treated waste	Unsorted Municipal Solid Waste
Final Output	60,000 t / a with respirometric index (RI) <1000
Start up	August 2015
Population	300.000
Employees	6



THE "PUBLIC COMPANY" **BELVEDERE S.p.A.** HAS ENTSORGA AS SUPPLIER OF CHOICE TO DELIVER AN **BIODRYING SYSTEM** TO **STABILIZE UNSORTED MUNICIPAL SOLID WASTE** AND SUBSTANTIALLY REDUCE ITS CARBON FOOTPRINT. THE SYSTEM IS PARTICULARLY WELL SUITED TO ADDRESS NEEDS OF COMMUNITIES LOOKING TO IMPLEMENT **QUICK AND EFFICIENT SOLUTIONS** TO PREPROCESS **UNSORTED MSW BEFORE DISPOSAL**, AS REQUIRED BY THE CURRENT EUROPEAN REGULATIONS



MBT BIOSTABILIZATION

Tehnimarket - Maramures - Romania



Capacity	112,000 tpa of MSW
Treated waste	Unsorted MSW
Final Output	44,000 tpa of compost like output
Start up	Successful test run in 2017
Population	330,000
Employees	6



BY PROVIDING A **BIOCELLE TURTLE™ SYSTEM**, ENTSORGA IS HELPING THE COMMUNITY IN THE MARAMURES DISTRICT TO **STABILIZE THE UNSORTED SOLID WASTE**, REDUCE ITS VOLUME AND PRODUCE A **COMPOST LIKE OUTPUT** SUITABLE FOR A SAFER LOWER IMPACT DISPOSAL.

A HIGH ENVIRONMENTAL COMPATIBILITY SOLUTION THAT EFFECTIVELY REDUCES THE GREENHOUSE GAS EMISSIONS AND THE PRODUCTION OF LEACHATE.



BIOSTABILIZATION

P.G.K.M.I.Sp.Z.o.o. – Inowroclaw, Poland



Yearly Throughput	20.000 TPA MSW
Waste processed	Unsorted Municipal Solid Waste
Final Output	60.000 t/y
Start up	May 2014
Population Served	10.000



AFTER THE INTRODUCTION OF RECENT EUROPEAN REGULATIONS ON WASTE TREATMENT, THE MUNICIPALITY OF INOWROCŁAW HAS CHOSEN ENTSORGA AS A CERTIFIED SUPPLIER TO DELIVER **A BIOLOGICAL MECHANICAL TREATMENT PLANT (MBT)** TO STABILIZE URBAN WASTE AND REDUCE THEIR GREENHOUSE GAS EMISSIONS. TODAY THE PLANT, MADE WITH **ENTSORGA'S SCRABBLE™ TECHNOLOGY AND A BIOFILTER**, IS ONE OF THE MOST ADVANCED IN POLAND.



ANAEROBIC DIGESTION SEMI DRY

Mostostal Warszawa SA - Biala Podlaska - Poland

Capacity 20.000 t/y of MSW
10.000 t/y of Food Waste from separated collection

Products Heat and Power (from CHP)
Compost and/or CLO (Compost Like Output)
Alternative Fuel (RDF or SRF)

Start up May 2014

People 100.000 equivalent population c.a



THE PLANT APPLIES **THE MOST INNOVATIVE GREEN TECHNOLOGIES** ON THE MARKET TO RECYCLE MATERIAL AND PRODUCE **RENEWABLE ENERGY** FROM WASTE, PROCESSING ORGANIC WASTE WITH **AN INTEGRATED ANAEROBIC, BIOSTABILIZATION/BIODRYING AND MECHANICAL TREATMENT SYSTEM.**

ENTSORGA HAS AWARDED WITH AN AEROBIC PROCESSING LINE TO FURTHER STABILIZED DIGESTATE. THE LINE INCLUDES **A SYSTEM OF 3 SCARABEO™ BIOCELLS** AND A **BIOFILTER.** A SOLUTION PROVIDING OBVIOUS **ENVIRONMENTAL ADVANTAGES,** AND THAT ALLOWED THE TOWN OF BIAŁA PODLASKA TO **LOWER THE COSTS OF WASTE COLLECTION AND DISPOSAL.**



ANAEROBIC DIGESTION WET

Acea Pinerolese – Pinerolo - Italy



Capacity	90.000 t/y (total yearly processing capacity of organic waste)
Treated waste	Source separated organic waste
Final Output	Biogas to steam and power: 10.241.500 Nm ³ /y (in 2015)
Start up	2002-2003
Population Served	Up to 800,000 (total waste shed served)
Employees	23 (including AD and composting)



FIRST OF ITS KIND IN ALL SOUTHERN EUROPE FOR THE COMPLEXITY OF THE SYSTEM AND THE WIDE RANGE OF TECHNOLOGIES EMPLOYED, THE POLO ECOLOGICO INTEGRATO PLANT BUILT BY ACEA REPRESENTS A **COMPLETE AND INTEGRATED SOLUTION** TO THE PROBLEM OF DISPOSAL OF ORGANIC WASTE FROM THE PROVINCE OF TURIN. THE ANAEROBIC TREATMENT PLANT PROCESSING SOURCE SPARATED FOOD WASTE USES A PATENTED AND INNOVATIVE SYSTEM, **THE FLORAWIVA MORE™** AND **COW**, AN **ENTSORGA'S PROPRIETARY SOLUTION**.



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